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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,279	09/26/2001	Mark Lee Miller	01P17873US	9652

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Siemens Corporation
Intellectual Property Department
186 Wood Avenue South
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EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/963,279	MILLER, MARK LEE	
	Examiner	Art Unit	
	John L. Goff	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *17-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a)☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-16, in the paper received 10/29/03 is acknowledged.

Drawings

2. New corrected drawings are required in this application because the drawings include hand written reference characters and the particulars of Figure 1B cannot be distinguished. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "66" has been used to designate both the power button and the pair of push buttons in Figures 5 and 6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adler (U.S. Patent 4,087,300).

Adler discloses a process for attaching metal to glass cloth using an adhesive. Adler teaches the method comprises providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated glass cloth (i.e. an insulator), contacting the metal and resin impregnated glass cloth, tacking the metal to the resin impregnated cloth using heated nip rolls (e.g. at 274-315 °C), and then subsequently fully curing the resin in an autoclave (e.g. at 121-204 °C and 20-250 psi) (Column 2, lines 35-37 and Column 6, lines 36-37, 40-41, and 49-53 and Column 7, lines 1-6 and Column 8, lines 3-8, 15-17, and 22-25). Adler teaches tacking prior to fully curing is an improvement over a single curing step in that a better (i.e. stronger) bond between the metal and impregnated glass cloth is formed (Column 1, lines 50-68 and Column 2, lines 1-24). Adler does not disclose any particular tacking pressure or time or any particular bond strength. However, Adler is not limited to any particular tacking pressure or time, and

Adler does not teach or suggest any reason for one of ordinary skill in the art to expect the tacking pressure or time used in Adler or the bond strength of Adler to fall outside of applicants wide ranges such that the claimed tacking pressure and time and bond strength appear intrinsic to Adler. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the usual tacking parameters such as temperature, pressure, and time as a function of quality of finished bond produced (i.e. bond strength) as doing so would have required nothing more than ordinary skill and routine experimentation.

Claim Rejections - 35 USC § 103

7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone (U.S. Patent 3,539,409) in view of Adler.

Stone discloses a method of making insulated wire for use as winding coils in electrical devices. Stone teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated glass cloth (i.e. an insulator), wrapping the resin impregnated glass cloth around the metal, and then curing the resin (Column 2, lines 47 and 51-55 and Column 3, lines 2-11 and Column 4, lines 10-14). Stone is silent as to disclosing a two step curing process as opposed to a single step curing process. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curing process taught by Stone to include a first tackifying step prior to fully curing the resin as was known in the art as shown for example by Adler (directed to bonding the same materials as Stone) to form a better (i.e. stronger) bond between the metal and glass cloth.

Regarding claims 1, 6, and 7, Stone as modified by Adler does not disclose any particular tacking pressure or time or any particular bond strength. However, neither Stone nor Adler are limited to any particular tacking pressure or time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the usual tacking parameters such as temperature, pressure, and time as a function of quality of finished bond produced (i.e. bond strength) as doing so would have required nothing more than ordinary skill and routine experimentation.

8. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone and Adler as applied in paragraph 7 above, and further in view of Beddows (U.S. Patent 3,750,273).

Stone and Adler as applied above teach all of the limitations in claims 8-10 except for a specific teaching of placing the winding coil in the electrical device (such as for example a rotor slot) prior to the final curing step. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the semi-cured (i.e. tacked) coil taught by Stone as modified by Adler within the electrical device prior to the final curing step as this was a well known technique in the art as shown for example Beddows such that the semi-cured coil retains flexibility for placement within the electrical device as opposed to a fully cured coil which may crack or distort during placement.

Beddows discloses a process of making pre-formed coils used in dynamoelectric machines. Beddows teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated tape (i.e. an insulator), wrapping the resin impregnated tape around the metal, tacking the metal to the resin impregnated tape, arranging the semi-cured (i.e. tacked) coil within the dynamoelectric machine, and then subsequently fully curing the resin

(Column 1, lines 4-11 and 51 and Column 2, line 61 and Column 3, lines 2, 6-7, and 17-20 and Column 4, line 19 and Column 5, lines 39-45 and 57-65). Beddows teaches the semi-cured tape allows the coil to retain flexibility for final placement within the dynamoelectric machine before fully curing the resin (Column 1, lines 4-11 and Column 5, lines 39-45).

9. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone in view of Adler and Bellows.

Stone discloses a method of making insulated wire for use as winding coils in electrical devices. Stone teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated glass cloth (i.e. an insulator), wrapping the resin impregnated glass cloth around the metal, and then curing the resin (Column 2, lines 47 and 51-55 and Column 3, lines 2-11 and Column 4, lines 10-14). Stone is silent as to disclosing a two step curing process as opposed to a single step curing process. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curing process taught by Stone to include a first tackifying step prior to fully curing the resin as was known in the art as shown for example by Adler (directed to bonding the same materials as Stone) to form a better (i.e. stronger) bond between the metal and glass cloth.

Regarding claims 11 and 14, Stone as modified by Adler does not disclose any particular tacking pressure or time or any particular bond strength. However, neither Stone nor Adler are limited to any particular tacking pressure or time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the usual tacking parameters such as temperature, pressure, and time as a function of quality of

finished bond produced (i.e. bond strength) as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claims 11, 15, and 16, Stone and Adler are silent as to a specific teaching of placing the winding coil in the electrical device (such as for example a rotor slot) prior to the final curing step. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the semi-cured (i.e. tacked) coil taught by Stone as modified by Adler within the electrical device prior to the final curing step as this was a well known technique in the art as shown for example Beddows such that the semi-cured coil retains flexibility for placement within the electrical device as opposed to a fully cured coil which may crack or distort during placement.

Beddows discloses a process of making pre-formed coils used in dynamoelectric machines. Beddows teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated tape (i.e. an insulator), wrapping the resin impregnated tape around the metal, tacking the metal to the resin impregnated tape, arranging the semi-cured (i.e. tacked) coil within the dynamoelectric machine, and then subsequently fully curing the resin (Column 1, lines 4-11 and 51 and Column 2, line 61 and Column 3, lines 2, 6-7, and 17-20 and Column 4, line 19 and Column 5, lines 39-45 and 57-65). Beddows teaches the semi-cured tape allows the coil to retain flexibility for final placement within the dynamoelectric machine before fully curing the resin (Column 1, lines 4-11 and Column 5, lines 39-45).

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Botts (U.S. Patent 2,821,498) in view of Adler.

Botts discloses a method of making insulated conductors for use in electrical devices. Botts teaches providing a conductive metal such as copper, providing a glass cloth (i.e. an insulator), wrapping the glass cloth around the metal, impregnating the glass cloth with resin (e.g. a thermoset such as acrylic), and then curing the resin in a heated press (Column 1, lines 15-18 and Column 2, lines 60-63 and Column 3, lines 68-73 and Column 4, lines 16-30 and 73-75 and Column 5, lines 2-6). Botts is silent as to disclosing a two step curing process as opposed to a single step curing process. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curing process taught by Botts to include a first tackifying step prior to fully curing the resin as was known in the art as shown for example by Adler to form a better (i.e. stronger) bond between the metal and glass cloth.

Regarding claims 1, 6, and 7, Botts as modified by Adler does not disclose any particular tacking pressure or time or any particular bond strength. However, neither Botts nor Adler are limited to any particular tacking pressure or time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the usual tacking parameters such as temperature, pressure, and time as a function of quality of finished bond produced (i.e. bond strength) as doing so would have required nothing more than ordinary skill and routine experimentation.

11. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Botts and Adler as applied in paragraph 10 above, and further in view of Beddows (U.S. Patent 3,750,273).

Botts and Adler as applied above teach all of the limitations in claims 8-10 except for a specific teaching of placing the insulated conductor in the electrical device (such as for example a rotor slot) prior to the final curing step. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the semi-cured (i.e. tacked) conductor taught by Stone as modified by Adler within the electrical device prior to the final curing step as this was a well known technique in the art as shown for example Beddows such that the semi-cured conductor retains flexibility for placement within the electrical device as opposed to a fully cured conductor which may crack or distort during placement.

Beddows discloses a process of making pre-formed coils used in dynamoelectric machines. Beddows teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated tape (i.e. an insulator), wrapping the resin impregnated tape around the metal, tacking the metal to the resin impregnated tape, arranging the semi-cured (i.e. tacked) coil within the dynamoelectric machine, and then subsequently fully curing the resin (Column 1, lines 4-11 and 51 and Column 2, line 61 and Column 3, lines 2, 6-7, and 17-20 and Column 4, line 19 and Column 5, lines 39-45 and 57-65). Beddows teaches the semi-cured tape allows the coil to retain flexibility for final placement within the dynamoelectric machine before fully curing the resin (Column 1, lines 4-11 and Column 5, lines 39-45).

12. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Botts in view of Adler and Bellows.

Botts discloses a method of making insulated conductors for use in electrical devices. Botts teaches providing a conductive metal such as copper, providing a glass cloth (i.e. an insulator), wrapping the glass cloth around the metal, impregnating the glass cloth wrapped metal with resin (e.g. a thermoset such as acrylic), and then curing the resin in a press (Column 1, lines 15-18 and Column 2, lines 60-63 and Column 3, lines 68-73 and Column 4, lines 16-30 and 73-75 and Column 5, lines 2-6). Botts is silent as to disclosing a two step curing process as opposed to a single step curing process. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curing process taught by Botts to include a first tackifying step prior to fully curing the resin as was known in the art as shown for example by Adler to form a better (i.e. stronger) bond between the metal and glass cloth.

Regarding claims 11 and 14, Botts as modified by Adler does not disclose any particular tacking pressure or time or any particular bond strength. However, neither Botts nor Adler are limited to any particular tacking pressure or time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the usual tacking parameters such as temperature, pressure, and time as a function of quality of finished bond produced (i.e. bond strength) as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claims 11, 15, and 16, Botts and Adler are silent as to a specific teaching of placing the conductor in the electrical device (such as for example a rotor slot) prior to the final curing step. However, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to arrange the semi-cured (i.e. tacked) conductor taught by Botts as modified by Adler within the electrical device prior to the final curing step as this was a well known technique in the art as shown for example Beddows such that the semi-cured coil retains flexibility for placement within the electrical device as opposed to a fully cured coil which may crack or distort during placement.

Beddows discloses a process of making pre-formed coils used in dynamoelectric machines. Beddows teaches providing a conductive metal such as copper, providing a resin (e.g. a thermoset such as epoxy) impregnated tape (i.e. an insulator), wrapping the resin impregnated tape around the metal, tacking the metal to the resin impregnated tape, arranging the semi-cured (i.e. tacked) coil within the dynamoelectric machine, and then subsequently fully curing the resin (Column 1, lines 4-11 and 51 and Column 2, line 61 and Column 3, lines 2, 6-7, and 17-20 and Column 4, line 19 and Column 5, lines 39-45 and 57-65). Beddows teaches the semi-cured tape allows the coil to retain flexibility for final placement within the dynamoelectric machine before fully curing the resin (Column 1, lines 4-11 and Column 5, lines 39-45).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

John L. Goff
December 24, 2003

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300